



HF Happenings 954

The view from Toto (ZS/NC-001), the photo taken by Roy, ZS3RW during their activation.

Operating Tip

Read The Rules - this tip is from Etienne, K7ATN: Read the rules. According to his experience with SOTA operations, "...being familiar with a contest or an event's rules could reduce newbie questions by about half. And make them more successful to boot."

The RaDAR Challenge on 10 July

The RaDAR Challenge is a unique event aimed at promoting the use of Rapidly Deployable Amateur Radio stations. The second leg runs from 00:00 UTC to 23:59 UTC on Saturday 10 July 2021, but RaDAR operators will decide on their maximum, single period, four-hour activity. Activity is on all bands and modes except QSOs via terrestrial FM repeaters. The RaDAR Challenge is not considered to be a contest but an individual challenge. The exchange is your call sign, your name, a RS, RST or RSQ report and your 8- or 10-character grid locator. Log sheets must be submitted by 23:59 CAT on Thursday 15 July 2021 by e-mail to edleighton@gmail.com. Get all the rules on page 100 of the 2021 Blue Book.



July

1 – Start of the SARL Financial Year and Registration for the October RAE opens
3 - SARL Newbie Contest; Durban ARC meeting
3 and 4 - Marconi Memorial HF contest
4 - ZS5 Sprint
9 – Provincial Schools close
10 - New Moon; RaDAR Challenge; AMSAT SA Space Symposium
10 and 11 - IARU HF Championships
12 - West Rand meeting
17 - Winter QRP contest; Magalies and Highway ARCs meeting
18 - ZS2 Sprint; YOTA Contest
20 - PEARS and Border ARC meetings
21 - SARL 80 m Club Sprint
24 - Full Moon; CTARC meeting; 24 and 25 - RSGB Islands on the Air contest
26 – Provincial schools open
27 - Secunda ARC meeting
28 and 29 - Delta Aquarids MS

The IARU HF Championships on 10 and 11 July

The IARU HF Championships takes place from 12:00 UTC on Saturday 10 July and ends at 11:59 UTC on Sunday 11 July 2021 with CW and phone activity on 160 to 10 metres with the aim to contact as

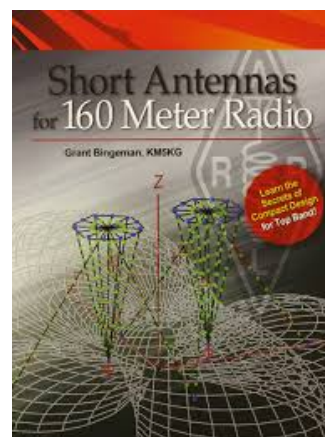


many other amateurs, especially IARU Member Society HQ stations, around the world as possible. The exchange for IARU Member Society HQ stations, such as ZS9HQ, is a RS or RST report and official IARU member society abbreviation, IARU Officers will give a RS or RST report and AC, R1, R2 and R3 as appropriate; all others send a signal report and their ITU zone, for South Africa it is Zone 57. Get all the information at <http://www.arrrl.org/iaru-hf-world-championship>.

The Results of the SARL Top Band QSO Party

Twenty-seven logs were received for the SARL 2021 Top Band QSO Party which took place from 21 to 25 June 2021. Considering that the band conditions were extremely challenging, the 85 stations participating made 825 QSOs. Participation certificates will be issued to all SARL members that submitted a log in due course.

- 1st Johannes van Zijl, ZS4DZ – 140 points
- 2nd Thanie Gibson, ZS4AZ – 138 points
- 3rd Gerhard Coetzee, ZS3TG – 128 points
- 4th William van Coller, ZS4L – 116 points
- 5th Kobus Boshoff, ZS6BOS and Chris Avenant, ZS6CPA - 108 points
- 7th the Northern Cape ARC ZS3NC; the Vrystaat ARC, ZS4B and Gideon Jannasch, ZS4GJA -102 points
- 10th Lucas Holtzhausen, ZS6LH - 96 points
- 11th Dave Du Toit, ZS6DDU - 94 points
- 12th Johan Bezuidenhout, ZS6JBZ and Phillip van Tonder, ZS6PVT - 90 points
- 14th Romeo Nardini, ZS6ARQ - 86 points
- 15th Esme Walsh, ZS3EW and Roy Walsh, ZS3RW - 80 points
- 17th Jack Kotze, ZS6JJK - 78 points
- 18th Veronica Kotze, ZR6TVK - 74 points
- 19th Cliff Jones, ZS6BJU - 72 points
- 20th Gert du Plessis, ZR6GRT - 70 points
- 21st the West Rand ARC, ZS6WR - 66 points
- 22nd Garth Moore, ZS2AAR - 48 points
- 23rd Awie Bosman, ZS6AVI and the Rustenburg Branch, ZS6RTB - 44 points
- 25th Anthony Roquette, ZS6ANT - 42 points
- 26th the Sasolburg ARC, ZS4SRK - 40 points
- 27th Danie Schnetler, ZS6DPS - 34 points



The Slow Morse Club

Special call signs EI1SMC (operated by John, EI3HQB and Keith, EI5KJ), GB1SMC (operated by Ray, G0OKR) and TM1SMC (operated by Jeff, F4IIQ) will be used between 17 and 25 July to celebrate the first anniversary of The Slow Morse Club. QSLs via F4IIQ. SMC is a Facebook group with around 1 800 members worldwide. "Our informal group encourages new operators, beginners, returnees and SWLs to join us, also those of us who enjoy code at a more relaxing pace. Usually there is a slow Morse session every weekend on 3,552 MHz." (<https://www.facebook.com/groups/3231315733622032/>).

The RSGB IOTA Contest (12:00 UTC Saturday 24 July to 12:00 UTC Sunday 25 July.)

Whether you are a chaser or activator, the Radio Society of Great Britain's [Islands on the Air Contest](#) is a welcome chance to celebrate the world's well-known and lesser-travelled island groups (more than 1 200 of them) dotting the planet. The contest is based



on the [RSGB IOTA](#) awards programme, established in 1964 to promote amateur radio and draw attention to the “widespread mystique surrounding islands.”

If you are new to the RSGB IOTA Contest, which has been around since 1993, click [here](#) to read a guide for novices who wish to operate from an official IOTA spot or those who seek to make contact with IOTA stations. Bands for the 24-hour contest are 80, 40, 20, 15 and 10 m on CW and phone. Also, for new island operators, check out this article by blogger Sean Kutzko, KX9X “[Your First Pileup, Techniques for Success](#).”

DX from Africa



Cape Verde, D4. Paco, EA7KNT plans to operate as D4SAL from Porto Antigo, Sal Island (AF-086) between 23 August and 5 September on the HF bands. More information to follow.

Word to the Wise

WinKeyer - years ago, Steve, K1EL, found that generating dots and dashes for CW using Microsoft Windows and simple transistor switching was problematic. Windows was not a real-time operating system and relying on the shared CPU for timing functions caused erratic generation of the proper timing. His solution was the WinKeyer, an external integrated circuit dedicated to CW keying tasks driven by the computer sending commands and characters via a serial port <https://www.k1elsystems.com/WK3IC.html>. Steve's IC also included support for paddle and speed inputs. His solution became supported by popular logging programs, and over the past fifteen years he has released new versions of his product with new interfaces, features, and functions. In addition to having his own set of products based on his ICs, his chips have been incorporated in radio interface products made by other manufacturers. Portions of the WinKeyer protocols have been emulated in other software and hardware.

K4 and N1MM

With a recent update to *N1MM Logger+*, Version 1.0.9165 (29 June 2021) the Elecraft K4 joins the list of supported radios. Previous versions of *N1MM Logger+* worked with the K4 by using the *N1MM Logger+* settings for the K3.

WSJT-X 2.5.0-rc3

Joe, K1JT, announces: "WSJT-X and MAP65 Users: We are pleased to announce that a public Release Candidate WSJT-X 2.5.0-rc3 is ready for download by beta testers. On *Windows* the installation package also includes MAP65 3.0.0-rc3. See the [Release Notes](#) for changes since WSJT-X 2.5.0-rc2. We are especially interested in feedback from users of the new mode Q65 and the separate programme MAP65. If you have been using Q65 with WSJT-X 2.4, 2.5, or MAP65 3.0, please send us a summary of your experiences. If you have found bugs, please send us details..." For more information, please see the [WSJT-X Home Page](#).

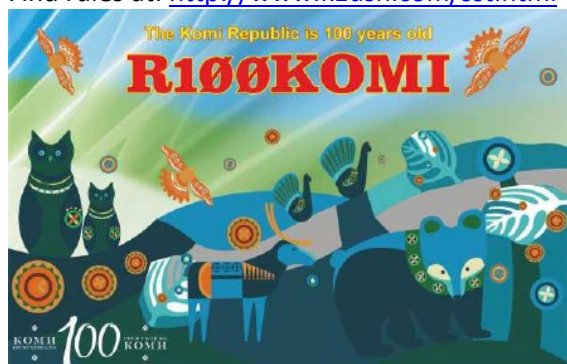
Contest Calendar

This week's contests as compiled by Bruce Horn, WA7BNM. The period covered is 5 to 12 July 2021.

K1USN Slow Speed Test
00:00 - 01:00 UTC 5 July
Geographic Focus: Worldwide
Participation: Worldwide

Mode: CW
Bands: 160, 80, 40, 20 m
Classes: Single Op - QRP, low or high

Max power: HP: >100 watts; LP: 100 watts;
 QRP: 5 watts
 Exchange: Maximum 20 wpm - Name and state, province or country
 Work stations: Once per band
 QSO Points: 1 point per QSO
 Multipliers: Each state/province/country once per band; W/VE do not count as country mults
 Score Calculation: Total score = total QSO points x total mults
 Submit logs by: 23:59 UTC 7 July 2021
 Post log summary at:
<http://www.3830scores.com>
 Mail logs to: (none)
 Find rules at: <http://www.k1usn.com/sst.html>



RSGB 80 m Club CW Championship
 19:00 - 20:30 UTC 5 July
 Geographic Focus: United Kingdom
 Participation: Worldwide
 Awards: United Kingdom
 Mode: CW
 Bands: 80 m Only
 Classes: (none)
 Exchange: RST and serial no
 QSO Points: 1 point per QSO
 Multipliers: (none)
 Score Calculation: (see rules)
 Submit logs by: 23:59 UTC 6 July 2021
 Upload log at: <http://www.rsgbcc.org/cgi-bin/hfenter.pl>
 Mail logs to: (none)
 Find rules at:
<https://www.rsgbcc.org/hf/rules/2021/r80mcc.shtml>

ARS Spartan Sprint
 01:00 - 03:00 UTC 6 July
 Geographic Focus: North America
 Participation: Worldwide
 Mode: CW
 Bands: 80, 40, 20, 15, 10 m

Classes: Skinny; Tubby
 Max power: 5 watts
 Exchange: RST, state, province or country and power
 Work stations: Once per band
 Submit logs by: 8 July 2021
 E-mail logs to: spartansprint@yahoo.com
 Mail logs to: (none)
 Find rules at:
<http://arsqrp.blogspot.com/2009/02/so-whats-spartan-sprint-and-how-do-i.html>

Worldwide Sideband Activity Contest
 01:00 - 01:59 UTC 6 July
 Geographic Focus: Worldwide
 Participation: Worldwide
 Mode: SSB
 Bands: 160, 80, 40, 20, 15, 10, 6 m
 Classes: Single Op - QRP, low or high; Overlay: Youth (26 years old or younger); Youth YL (female 26 years old or younger); YL (female older than 26 years)
 Max power: HP: 1 500 watts; LP: 100 watts;
 QRP: 5 watts
 Exchange: RS and age group (OM, YL, Youth YL or Youth)
 Work stations: Once per band
 QSO Points: 1 point per QSO with OM; 5 points per QSO with YL; 10 points per QSO with Youth; 15 points per QSO with Youth YL
 Multipliers: Each DXCC once per band
 Score Calculation: Total score = total QSO points x total mults
 Submit logs by: 01:59 UTC 7 July 2021
 E-mail logs to: (none)
 Upload log at: <https://logs.wwsac.com/>
 Mail logs to: (none)
 Find rules at: <https://wwsac.com/rules.html>

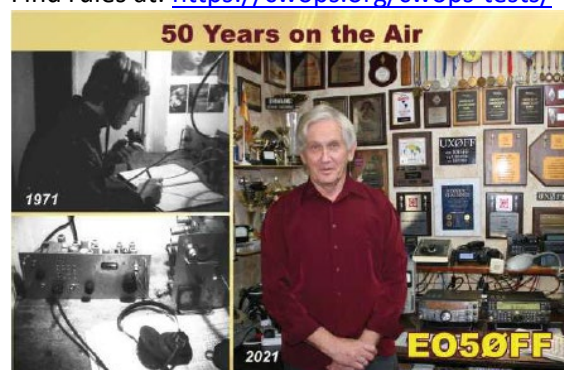
RTTYOPS Week Sprint
 17:00 - 19:00 UTC 6 July
 Geographic Focus: Worldwide
 Participation: Worldwide
 Mode: RTTY
 Bands: 80, 40, 20 m
 Classes: Single Op
 Max operating hours: 2 hours
 Exchange: other station's call, your call, serial no and your name
 Work stations: Once per band
 QSO Points: 1 point per QSO

Multipliers: (none)
Score Calculation: Total score = total QSO points
Submit logs by: 23:59 UTC 13 July 2021
E-mail logs to: rtty-week-tuesday@rttyops.com
Mail logs to: (none)
Find rules at: <http://rttyops.com/>

Phone Weekly Test – Fray
02:30 - 03:00 UTC 7 July
Geographic Focus: North America
Participation: Worldwide
Mode: SSB
Bands: 160, 80, 40, 20, 15 m
Classes: Single Op
Max power: 100 watts
Exchange: NA: Name and state, province or country; non-NA: Name
Work stations: Once per band
QSO Points: NA station: 1 point per QSO; non-NA station: 1 point per QSO with an NA station
Multipliers: Each US state (including KH6/KL7) once per band; Each VE province/territory once per band; Each North American country (except W/VE) once per band
Score Calculation: Total score = total QSO points x total mults
Submit logs by: 03:00 UTC 9 July 2021
E-mail logs to: (none)
Post log summary at:
<http://www.3830scores.com>
Mail logs to: (none)
Find rules at:
http://www.perluma.com/Phone_Fray_Contest_Rules.pdf

CWops Mini-CWT Test
13:00 - 14:00 UTC and 19:00 - 20:00 UTC 7 July and 03:00 - 04:00 UTC and 07:00 - 08:00 UTC 8 July
Geographic Focus: Worldwide
Participation: Worldwide
Awards: Worldwide
Mode: CW
Bands: 160, 80, 40, 20, 15, 10 m
Classes: Single Op - QRP, low or high
Max power: HP: >100 watts; LP: 100 watts; QRP: 5 watts
Exchange: Member: Name, member no or "CWA"; non-Member: Name and state, province or country

Work stations: Once per band
QSO Points: 1 point per QSO
Multipliers: Each call once
Score Calculation: Total score = total QSO points x total mults
Submit logs by: 08:00 UTC 10 July 2021
Post log summary at:
<http://www.3830scores.com>
Mail logs to: (none)
Find rules at: <https://cwops.org/cwops-tests/>



Walk for the Bacon QRP Contest
00:00 - 01:00 UTC 8 July and 02:00 UTC-03:00 UTC 9 July
Geographic Focus: North America
Participation: Worldwide
Mode: CW
Bands: 40 m Only
Classes: Single Op
Max power: 5 watts
Exchange: Maximum 13 wpm – RST, state, province or country, name and member no or power
Work stations: Once per day
QSO Points: 1 point per QSO with non-member; 3 points per QSO with member on same continent; 5 points per QSO with member on different continent
Multipliers: (none)
Score Calculation: Total score = total QSO points
Submit logs by: 15 July 2021
E-mail logs to: (none)
Upload log at:
<https://qrpcontest.com/pigwalk40/autolog.php>
Mail logs to: (none)
Find rules at:
<https://qrpcontest.com/pigwalk40/>

RTTYOPS Week Sprint
17:00 - 19:00 UTC 8 July

Geographic Focus: Worldwide
 Participation: Worldwide
 Mode: RTTY
 Bands: 80, 40, 20 m
 Classes: Single Op
 Max operating hours: 2 hours
 Exchange: other station's call, your call, serial no and your name
 Work stations: Once per band
 QSO Points: 1 point per QSO
 Multipliers: (none)
 Score Calculation: Total score = total QSO points
 Submit logs by: 23:59 UTC 15 July 2021
 E-mail logs to: rtty-week-thursday@rttyops.com
 Mail logs to: (none)
 Find rules at: <http://rttyops.com/>



EACW Meeting
 19:00 - 20:00 UTC 8 July
 Geographic Focus: Spain
 Participation: Worldwide
 Mode: CW
 Bands: 80, 40 m
 Classes: Single Op
 Exchange: EACW Member: RST, member no and nickname; EA non-Member: RST, nickname and EA province; non-EA: RST, nickname and DXCC prefix
 Work stations: Once per band
 QSO Points: 1 point per QSO
 Multipliers: (none)
 Score Calculation: Total score = total QSO points
 Submit logs by: 23:59 UTC 10 July 2021
 E-mail logs to: (none)
 Post log summary at: <http://www.3830scores.com>
 Mail logs to: (none)

Find rules at:
<https://www.eacwspain.es/sample-page/eacwmeeting/>
 QRP Fox Hunt
 01:00 - 02:30 UTC 9 July
 Geographic Focus: United States
 Participation: Worldwide
 Mode: CW
 Bands: 20 m Only
 Classes: Single Op - fox or hound
 Max power: 5 watts
 Exchange: RST, state, province or country, name and power output
 QSO Points: 1 point per QSO
 Multipliers: (none)
 Score Calculation: Total score = total QSO points
 Submit logs by: 02:30 UTC 10 July 2021
 E-mail logs to: (see rules)
 Mail logs to: (none)
 Find rules at:
http://www.qrpfoxhunt.org/summer_rules.htm

NCCC RTTY Sprint
 01:45 - 02:15 UTC 9 July
 Geographic Focus: North America
 Participation: Worldwide
 Mode: RTTY
 Bands: (see rules)
 Classes: (none)
 Exchange: Serial no, name and QTH
 Score Calculation: Total score = total QSO points x total mults
 Submit logs by: 11 July 2021
 E-mail logs to: (none)
 Post log summary at:
<http://www.3830scores.com/>
 Mail logs to: (none)
 Find rules at:
<http://www.ncccsprint.com/rttyns.html>

NCCC Sprint
 02:30 - 03:00 UTC 9 July
 Geographic Focus: North America
 Participation: Worldwide
 Mode: CW
 Bands: (see rules)
 Classes: (none)
 Exchange: Serial no, name and QTH

Score Calculation: Total score = total QSO points x total mults

Submit logs by: 11 July 2021

E-mail logs to: (none)

Post log summary at:

<http://www.3830scores.com/>

Mail logs to: (none)

Find rules at:

<http://www.ncccsprint.com/rules.html>



K1USN Slow Speed Test

20:00 - 21:00 UTC 9 July

Geographic Focus: Worldwide

Participation: Worldwide

Mode: CW

Bands: 160, 80, 40, 20 m

Classes: Single Op - QRP, low or high

Max power: HP: >100 watts; LP: 100 watts;

QRP: 5 watts

Exchange: Maximum 20 wpm - Name and state, province or country

Work stations: Once per band

QSO Points: 1 point per QSO

Multipliers: Each state/province/country once per band; W/VE do not count as country mults

Score Calculation: Total score = total QSO points x total mults

Submit logs by: 23:59 UTC 11 July 2021

Post log summary at:

<http://www.3830scores.com>

Mail logs to: (none)

Find rules at: <http://www.k1usn.com/sst.html>

SKCC Weekend Sprintathon

12:00 UTC 10 July to 24:00 UTC 11 July

Geographic Focus: Worldwide

Participation: Worldwide

Awards: Worldwide

Mode: CW

Bands: 160, 80, 40, 20, 15, 10, 6 m

Classes: Single Op; Multi-Op

Exchange: RST, state, province or country, name and SKCC no or "NONE"

Work stations: Once per band

QSO Points: 1 point per QSO

Bonus Points: (see rules)

Multipliers: Each state, province, or country once

Score Calculation: Total score = (total QSO points x total mults) and bonus points

Submit logs by: 18 July 2021

Post log summary at:

http://www.skccgroup.com/operating_activities/weekend_sprintathon/submit-display.php

Mail logs to: (none)

Find rules at:

http://www.skccgroup.com/operating_activities/weekend_sprintathon/

IARU HF World Championship

12:00 UTC 10 July to 12:00 UTC 11 July

Mode: CW, Phone

Bands: 160, 80, 40, 20, 15, 10 m

Classes: Single Op - CW, phone or mixed - QRP, low or high; Single Op Unlimited - CW, phone or mixed - QRP, low or high; Multi-Single; IARU Member Society HQ

Max power: HP: >150 watts; LP: 150 watts;

QRP: 5 watts

Exchange: IARU HQ: RS(T) and IARU Society;

Non-HQ: RS(T) and ITU Zone no

Work stations: Once per band per mode

QSO Points: 1 point per QSO with same zone

or with HQ stations; 3 points per QSO with different zone on same continent; 5 points per QSO with different zone on different continent

Multipliers: Each ITU zone once per band; Each IARU HQ and each IARU official once per band

Score Calculation: Total score = total QSO points x total mults

Submit logs by: 12:00 UTC 18 July 2021

E-mail logs to: (none)

Upload log at: <http://contest-log-submission.arrrl.org/>

Mail logs to: ARRL Contest Logs, IARU HF World Championship, Box 310905, Newington, CT 06111, USA

Find rules at: <http://www.arrrl.org/iaru-hf-world-championship>

QRP ARCI Summer Homebrew Sprint

20:00 - 23:00 UTC 11 July

Mode: CW
 Bands: 160, 80, 40, 20, 15, 10 m
 Classes: All Band; Single Band; High Bands; Low Bands
 Exchange: RST, state, province or country and ARCI no or power
 Work stations: Once per band
 QSO Points: 5 points per QSO with ARCI member; 4 points per non-member QSO with different continent; 2 points per non-member QSO with same continent; Bonus Points: 2 000 points per band for using homebrew transmitter; 3 000 points per band for using homebrew receiver; 5 000 points per band for using homebrew transceiver; 5 000 points for operating portable with emergency power and temporary antennas
 Multipliers: States, once per band; VE Provinces, once per band; Countries, once per band; Power Mult: >5 W = x 1, 1 - 5 W = x 7, 250 mW – 1 W = x 10, 55 - 250 mW = x 15, <55 mW = x 20
 Score Calculation: Total score = (total QSO points x (state mults and province mults and country mults) x power mult) and bonus points
 Submit logs by: 25 July 2021
 E-mail logs to: (none)
 Upload log at: <http://www.qrpcontest.com>
 Mail logs to: (none)
 Find rules at: <http://qrparci.org/contest/summer-homebrew-sprint-2020>

 4 States QRP Group Second Sunday Sprint
 00:00 - 02:00 UTC 12 July
 Geographic Focus: North America
 Participation: Worldwide
 Mode: CW, SSB
 Bands: 160, 80, 40, 20, 15, 10 m
 Classes: Single Op

Exchange: Member: RS(T), state, province or country and member no; Non-member: RS(T), state, province or country and power
 Work stations: Once per band
 QSO Points: 1 point per QSO with non-member; 2 points per QSO with member
 Multipliers: (none)
 Score Calculation: Total score = total QSO points
 Submit logs by: 14 July 2021
 E-mail logs to: (none)
 Post log summary at: <http://qrptest.com/4sqr>
 Mail logs to: (none)
 Find rules at: http://www.4sqr.com/SSS/sss_rules.pdf

 K1USN Slow Speed Test
 00:00 - 01:00 UTC 12 July
 Geographic Focus: Worldwide
 Participation: Worldwide
 Mode: CW
 Bands: 160, 80, 40, 20 m
 Classes: Single Op - QRP, low or high
 Max power: HP: >100 watts; LP: 100 watts; QRP: 5 watts
 Exchange: Maximum 20 wpm - Name and state, province or country
 Work stations: Once per band
 QSO Points: 1 point per QSO
 Multipliers: Each state/province/country once per band; W/VE do not count as country mults
 Score Calculation: Total score = total QSO points x total mults
 Submit logs by: 23:59 UTC 14 July 2021
 Post log summary at: <http://www.3830scores.com>
 Mail logs to: (none)
 Find rules at: <http://www.k1usn.com/sst.html>

Next Week's Contests

Worldwide Sideband Activity Contest, 01:00 - 01:59 UTC 13 July
 RTTYOPS Week Sprint, 17:00 - 19:00 UTC 13 July
 Phone Weekly Test – Fray, 02:30 - 03:00 UTC 14 July
 CWops Mini-CWT Test, 13:00 - 14:00 UTC and 19:00 - 20:00 UTC 14 July 03:00 - 04:00 UTC and 07:00 - 08:00 UTC 15 July
 RSGB 80 m Club SSB Championship, 19:00 - 20:30 UTC 14 July
 NAQCC CW Sprint, 00:30 - 02:30 UTC 15 July
 RTTYOPS Week Sprint, 17:00 - 19:00 UTC 15 July

EACW Meeting, 19:00 - 20:00 UTC 15 July
 QRP Fox Hunt, 01:00 - 02:30 UTC 16 July
 NCCC RTTY Sprint, 01:45 - 02:15 UTC 16 July
 NCCC Sprint, 02:30 - 03:00 UTC 16 July
 K1USN Slow Speed Test, 20:00 - 21:00 UTC 16 July
 Russian Radio Team Championship, 07:00 - 14:59 UTC 17 July
 Trans-Tasman Low-Bands Challenge, 08:00 - 14:00 UTC 17 July
 Feld Hell Sprint, 12:00 - 13:59 UTC 17 July
 North American RTTY QSO Party, 18:00 UTC 17 July to 05:59 UTC 18 July
 RSGB International Low Power Contest, 09:00 - 12:00 UTC and 13:00 - 16:00 UTC 18 July
 YOTA Contest, 10:00 - 21:59 UTC 18 July
 CQC Great Colorado Gold Rush, 20:00 - 21:59 UTC 18 July
 Run for the Bacon QRP Contest, 23:00 UTC 18 July to 01:00 UTC 19 July
 K1USN Slow Speed Test, 00:00 - 01:00 UTC 19 July
 Worldwide Sideband Activity Contest, 01:00 - 01:59 UTC 20 July
 RTTYOPS Week Sprint, 17:00 - 19:00 UTC 20 July

<https://sarlnewsbulletin.wordpress.com/hfhappenings/> and www.sarl.org.za/hf_happenings.asp

Items used with acknowledgement to the ARRL Letter, the ARRL DX News, the ARRL Contest Update, OPDX Bulletin, 425 DX Bulletin, DXNL Newsletter, WIA-News, the RSGB News, DxCoffee, Southgate ARC News, DX World and the Amateur Radio Newsletter